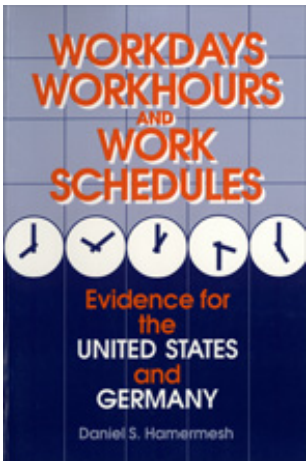
W.E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH

Upjohn Institute Press

Setting the Stage



Daniel S. Hamermesh
University of Texas at Austin

Chapter 1 (pp. 1-9) in:
Workdays, Workhours and Work Schedules: Evidence for the United States and Germany
Daniel S. Hamermesh
Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1996

CHAPTER 1

Setting the Stage

The Main Issues

The use of time is central among the decisions people make throughout their lives. These decisions include choices about time spent on the job as well as time spent at home. Not surprisingly, the ubiquity of time use decisions in people's lives has been matched by their pervasiveness in the body of research that labor economists have undertaken. They have been the focus of two major areas of labor economics, studies of labor supply and of labor demand.

There are two distinct ways of analyzing people's utilization of their available time: *integrally*, by how time is allocated into separate activities over some relatively long time interval; and *instantaneously*, by which few (one, or at most several) of the myriad possible activities are engaged in at a particular point in time. The general issue in the study of time use is whether we add up (integrate) people's activities over some longer period of time or instead take snapshots of what they are doing at particular points in time (instantaneously).

For nearly fifty years most of our data have been collected and presented in ways that make studying the integral use of time fairly easy. For example, the American Current Population Survey (CPS)-style data generate information about total activity during the past week. Even within this integral approach to time use the choice of temporal aggregates has been remarkably restrictive. Stimulated by the availability of CPS-type data, we have devoted tremendous attention to hours of work and leisure integrated over the week. Information obtained retrospectively (e.g., from the CPS, the Census, or the annual surveys that make up our large panels of household data) has allowed some analysis of weeks of work integrated over the (previous) year; and in some cases this has been combined with the study of (current) weekly hours. We have paid some attention to integrating time use over the lifetime

(though generally through the construction of artificial life histories). Other potentially interesting possibilities, such as integrating over the day to examine daily hours of work and nonmarket activities or integrating over the week to obtain days of work, have been generally ignored by economists and studied only very sparsely by other researchers.

Most sets of data do not allow one to study instantaneous time use. Even where such data are available, however, we integrate the information into categories that mirror those available in standard data sets, so that we lose their underlying instantaneous characteristics.[1] Because of these problems and choices, instantaneous time use has received much less attention than integral time use.

The central purpose and overarching theme of this monograph are its move beyond standard approaches to studying time use to see what we can learn from other ways of looking at the data. The two major new foci are: (1) the division of work time into hours per day and days per week (as opposed to the standard analysis of weekly hours of work), a novel integration of time use; and (2) the patterns of the particular times of the day and week when people are working, a focus on instantaneous time use. The novelty of the approach should itself generate interesting insights into how people spend their time and how those outcomes differ across groups in the population. If nothing else, these will enhance our understanding of what the standard cuts of the data have been telling us.

These approaches can do more than that, however. By analyzing workers' and employers' choices of workdays and working hours per day, we will be able to understand the role of fixed costs of getting to work and of adding workdays to plant schedules in a way that enhances our understanding of the relation between work time and the determination of employment. This in turn has implications for a variety of government policies, including those that offer incentives to alter work schedules or that attempt to offset the costs of working. Thus policies on overtime work and the length of workdays and workweeks require the analysis in this monograph, as indeed does any policy related to the restructuring of time at work. Similarly, additional light can be shed on policies related to child care if we can learn more about how the length of the workday is determined and how people time their working hours over the day and week.

An International Perspective

Most of the detailed analyses presented in this monograph are carried out using microeconomic data for both the United States and Germany (actually, the previous West Germany only). I study two economies rather than the usual one for two reasons. First, and most important, all too often the ethnocentric focus of American social scientists on facts that are country-specific detracts from their ability to provide generally useful results and to tell whether tests of their theories have anything more than parochial applications. A bit broader focus is a wonderful check on our tendency to generalize findings from what may be the unique and idiosyncratic socioeconomic outcomes produced by tastes, policies, institutions and temporary aberrations in our own country. A second justification is that the detailed study of two countries' outcomes along narrow dimensions allows us to use conclusions about behavior in each to examine the impact of the other country's policies.

I choose to study Germany for several reasons. Like the United States, it is a large industrialized economy. Yet it is sufficiently different socially from the United States to generate some interesting comparisons. Also, it is the only such country for which an easily accessible set of data is available that provides information on days, daily hours and work schedules on a broad sample of workers that is more or less comparable to U.S. data, but that also complements them in various ways.

As background information for those comparisons, consider first the information on broad labor-market outcomes shown for 1991 in the United States (1990 in the former West Germany) presented in table 1.1. Whether we use the official data or attempt to make the data more comparable by calculating labor force participation from the samples used in this study, it is quite clear that female participation in the former West Germany is substantially below that in the United States (and is in fact comparable to female participation in the United States in the late 1970s).

By 1990 average weekly hours of work in Germany were lower than in the United States. Other evidence shows that they are also much more tightly distributed around this average. Very few German workers

are working extremely long hours (see Hamermesh 1995); and, as the table shows, a smaller fraction of the German labor force was on part-time schedules, despite the fact that part-time work is defined as 34 hours or less in the United States, but 36 hours or less in Germany (where in some industries 36 hours is the standard workweek). A long-time American citizen born in Germany summed up the difference in workers' attitudes toward labor supply by noting that, "Germans put leisure first and work second. In America, it's the other way around."[2]

Table 1.1 Labor Market Characteristics, United States, 1991, and Germany, 1990

	United States	Germany
Female participation rate:		
All women ≥ 17[a]	53.2	45.4
Women ages 17-64[a]	63.4	52.9
Official[b]	57.4	52.0
Average weekly work hours[b]	39.3	38.3
Percent part-time workers[b]	18.9	15.0
Percent self-employed[c]	7.6	7.7
Percent with second jobs[a]	6.6	7.2
Unionization (percentages in 1990)[d]	15.6	32.9
Unemployment rate[b]	6.6	7.2

a. Calculated from the May 1991 CPS and the GSOEP.
b. Taken from *Employment and Earnings*, January 1992, and from Institut für Arbeitsmarkt- und Berufsforschung, *Zahlen-Fibel*, 1992. The U.S. participation rate covers all women ages 16 and over; the German rate covers women 15 through 65.
c. OECD, *Employment Outlook*, July 1992, p.158.
d. OECD, *Employment Outlook*, July 1994, p. 184.

The rate of self-employment is almost identical in the two countries, as measured in the most comparable way. That measurement, however, excludes owner-managers of incorporated enterprises, so that it is likely that the incidence is somewhat higher in the United States than in Germany, though the differences are probably not large. The comparisons in the table, which are based on similar sets of household

interviews, suggest that moonlighting rates are quite similar in the two countries. When we eliminate short second jobs (less than 20 hours per week), those that are unlikely to affect the worker's typical daily hours, total workdays per week or timing of work on a typical day, we find that the incidence is quite low in both countries, though it is much higher in the United States (1.9 percent) than in Germany (0.3 percent).

The biggest international difference is in the incidence of unionization, which is over twice as great in Germany as in the United States and, in contrast to the American decline, has been relatively stable over the past two decades. Moreover, union contracts in many German industries are formally extended to nonunion plants, a phenomenon that (at least explicitly) is very rare in the United States. These differences mean that any international similarities that we find are all the more striking, since they arise out of labor markets that differ substantially along this one dimension.

Aggregate unemployment in the two countries was quite similar in these two years, so that in the comparisons in the following chapters we are examining labor markets that are at roughly the same degree of tightness. We should remember, however, that for the United States the 6.6 percent represents experience during the middle of a long but moderate recession. The German unemployment rate of 7.2 percent marked the fifth and penultimate year of falling unemployment.

The industrial structures of the two countries also differ, as shown by the data in table 1.2 on the distributions of employment by industry. The U.S. workforce is much less concentrated in manufacturing than the German, and much more concentrated in retail and wholesale trade and in services.[3] Coupled with interindustry differences in technology, the countries' different distributions of employment may together generate differences in the timing of work and in the relationships among various temporal aggregates of work time.

This large array of institutional and other differences requires constant attention in the subsequent analyses so that we can be sure that any international differences in the outcomes that we examine do not merely result from the different ways in which the countries' economies and societies are structured. Obversely, the existence of these differences means that outcomes that are uniform across the two countries might be viewed as being fairly typical of the labor markets in industrialized countries more generally.

Table 1.2 Industrial Distribution of Employment, United States, 1991, and Germany, 1990 (Percent of Nonagricultural Employment)

Industry	United States	Germany
Mining (Energy and mining in Germany)	0.6	1.7
Construction	4.3	7.0
Manufacturing	16.9	32.5
Trade	23.3	13.6
Transport and public utilities	5.3	5.8
Finance, insurance and real estate	6.2	3.2
Services	26.4	16.0
Government	17.0	15.6
Private household, including nonprofits		4.6

SOURCE: *Economic Report of the President*, 1992; Institut für Arbeitsmarkt und Berufsforschung, *Zahlen-Fibel*, 1992.

In any study that considers labor market outcomes of any sort, one must be very hesitant in drawing conclusions about the results' importance for policy and their implications for changes in policy. Indeed, whether policies in a particular area are even necessary, much less how they might be structured, is a consideration that should induce more than a touch of modesty in the researcher/author. That is even more true in a study that examines outcomes in two countries, since even similar outcomes and apparently similar institutions do not necessarily imply that the same policy will be equally effective, or even have an effect in the same direction, if applied in both countries (Hamermesh 1995). For these reasons the discussion of policies in this monograph is in most instances at a fairly general level. Nonetheless, the results of the analyses are sufficiently relevant for a variety of types of policies that readers can draw their own conclusions about what specific measures they might imply.

An Overview of the Data

For over 20 years the United States Bureau of Labor Statistics (BLS) has included information on multiple job-holding as part of the May Current Population Survey. From 1973-78, in 1985, and again in 1991 questions about the timing of work were added to the regular Multiple Jobholding Supplement to the May survey. These elicited information on the number of days per week and hours per day (or per week) on each job, and when each job typically began and finished. In this monograph I base much of the empirical research for the United States on the May 1991 Supplement and related data. These data are used by themselves in chapter 3 and also linked to the March 1991 CPS in chapter 2 to examine the relation of days and hours to weeks worked. The May 1977 and 1978 Supplements are combined to form a panel of data on individual workers and are used in the analyses in chapter 4, since they provide the most recent available information on a sample of workers whose timing of work is observed in two years. The May 1985 and May 1991 Supplements are used in chapter 5, along with information from the national income and product accounts. No other set of American data provides information on both days and daily hours, and on the timing of work. No other set of data provides a large random sample of the entire American workforce.

No comparably large publicly available German survey has the same information as the May CPS Supplements. Similar data are available, however, from the German Socioeconomic Panel (hereafter GSOEP), an ongoing study of roughly 9,000 people in the former West Germany that began in 1984 and to which a panel of approximately 5,000 East Germans was added in 1990. This set of data has already received substantial attention from both German and American researchers. (Gerlach and Hübler 1992 and Hunt 1995 are two of many examples.) Information about the number of days per week and hours per day on the main job was obtained in the seventh (1990) wave. The survey also elicited information on some aspects of the timing of work, particularly work in the evenings, at night, and on weekends. Unlike the CPS, this wave of the GSOEP also has potentially useful information on workers' attitudes and problems in scheduling work. The 1990 wave of the GSOEP provides most of the data for this study. In the

1992 wave, members of the sample were also reinterviewed about their days and daily hours of work, and these data are combined with the same information for 1990 to provide the longitudinal information that is used in the analyses in chapter 4.

In an attempt to make the results for the two countries as closely comparable as possible, in each part of each chapter where data from both countries are used I present each table in two forms, one labeled (U) for the United States, the other labeled (G) for the Federal Republic of Germany. While the underlying data are never identical, I aggregate up the data set offering more detail where the sacrifice in information is not too great (usually, the American CPS data) to facilitate cross-country comparisons.

Outline of the Monograph

The second chapter of this monograph examines the determinants of days per week and daily hours of work in the two countries, as well as how these differ depending on workers' differing attachment to the labor force. The major focus here is how these alternative dimensions of work time are correlated with various measures of demographic and socioeconomic status. The chapter also explores how important work schedules are that differ from the eight-hour day and five-day week that we have come to believe is standard.

Chapter 3 studies the instantaneous use of time as it is divided between work and nonwork activities. Much of the focus in the chapter is on establishing some simple facts about the patterns of timing of work and how they vary across labor force participants. Additional analysis centers on how decision making within marriage affects spouses' timing of work.

The analyses in chapters 2 and 3 are based on cross-section data. Chapter 4 uses the 1977–78 panel data constructed for this project and departs from that mode of research to examine how decisions about days and daily hours, and about the timing of work, respond to changes in individuals' circumstances. Of interest here is the effect of changing jobs on work schedules and patterns, particularly whether days or daily

hours are altered more and how different kinds of workers change them differently when they switch jobs.

Chapter 5 analyzes how employers combine workers, daily hours, and days per week in production. The focus here, unlike the other chapters, is on labor demand; and unlike those chapters, I present little comparative analysis. The results of the chapter are directly relevant for considering how one might alter public policy to provide incentives for a shorter workweek with as little disruption as possible to production.

The end result of the large amount of evidence presented should, I hope, be to make it clear that we can expand our knowledge of people's labor supply and other aspects of their use of time by moving beyond the very stale concepts of weekly hours and weeks worked. Increasing numbers of sets of data now provide information on days worked per week and daily hours, so that restricting analyses to their product, weekly hours, is no longer necessary. More important, we are beginning to have information on when people work (and not merely on whether they work according to such concepts as "evening shifts" or "night shifts"), so that we can use the notion of instantaneous time use to study people's individual and joint demands for leisure. Chapter 6 outlines the new knowledge that the approach here has made possible in terms of understanding how labor markets work, comparing labor markets in two major countries, and devising labor market policies.

NOTES

1. For example, the Time Use Study of the University of Michigan collected diaries covering each quarter-hour of time for four days in a year. These are instantaneous data; but well-known studies integrate them (Stafford and Duncan 1980; Biddle and Hamermesh 1990), and I am unaware of any research that uses their instantaneous characteristics. The same uniformity—integrating data that have been collected on an instantaneous basis—characterizes the international comparisons of time use in Szalai (1972).

2. *Wall Street Journal*, July 14, 1994, p. B1.

3. An alternative comparison (Appelbaum and Schettkat 1990) that also used the CPS but was based on the German *Mikrozensus* shows for 1987 that 25 percent of U.S. employment was in construction and manufacturing, compared to 41 percent in Germany.